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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

Reply To
Attn Of: WCM-121

October 1, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Rob Hartman
RCRA/CERCLA Manager
FMC Corporation Pocatello Plant
P.O. Box 4111
Pocatello, Idaho 83202

RE: Notice of Deficiency (NOD) Pond 17 Closure Plan, Astaris Pocatello Facility, EPA ID # 07092 9518

Dear Mr. Hartman:

In June, 2001, FMC/Astaris submitted the Closure Plan for Pond 17. The U.S. Environmental Protection Agency Region 10(EPA)is providing the public an opportunity to comment on the plan from October 4, 2001 through November 2, 2001.

Enclosed are modifications to Section 1 through Section 10 of the Closure Plan that have been identified up to this point, which must be made before EPA can approve phase 1 of this plan. The Plan and specifically Attachment 10-1, 10-2 and the Post Closure Ground Water Monitoring Plan are still under review and comments will be submitted in the next few weeks. These enclosed modifications are necessary to ensure adequate controls are in place to minimize releases of hazardous waste and hazardous constituents, and to protect human health and the environment.

If you have any questions, please contact me at (206) 553-6636.

Sincerely,

Linda Meyer

Linda Meyer
RCRA/TSCA Permits Team

Enclosure
cc: Susan Hanson, Shoshone-Bannock Tribes w/enclosure
Jeanette Wolfely, Shoshone-Bannock Tribes
Blaine Edmo, Chairman, Fort Hall Business Council
Robert J. Fields, FMC

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GENERAL COMMENTS
ASTARIS/FMC Closure Plan for Pond 17 dated June 2001

1. 40 C.F.R. § 265.228 (b)(2) requires the owner/operator of a surface impoundment which is to be closed as a landfill to maintain and monitor the leak detection system in accordance with 40 C.F.R. § 265.226(b). 40 C.F.R. § 265.226(b)(2) requires the company to record the amount of liquids removed from the leak detection sump weekly during phase 1 of the closure, and with reduced frequency after the final cover is installed depending on the amounts of liquids found in the sump. The Closure and Post-Closure Plan must be revised to include: 1) piping and system modifications for continued operation of the leak collection, detection, and removal system (LCDRS); 2) operating plans to monitor and remove liquids from the sumps and; 3) record keeping for the amount of liquid collected in the sumps.

2. The Pond 17 Closure Plan contains repeated statements concerning the similarity of waste in Pond 17 with waste in Ponds 8S and 15S where there has been no reported problems with phosphine gas during closure. These assertions may be correct, however, absence of adequate characterization data for the wastes in the ponds 8S, 15S, and 17 raises concern that the Pond 17 wastes may be similar to those in Pond 16S, where gas emission occurred in early 2001. The Closure Plan must be revised to include:

   a) Results of analyses that have been conducted on the wastes in Pond 17, and a list of all hazardous constituents likely to be found.

   b) Results of any separate analyses for pond solids and liquids (decant water) for Pond 17 wastes, including total phosphorus results and toxicity characteristic leaching procedure extract analyses results from solids samples.

   c) An assessment of the representativeness of the above data.

   d) An evaluation of the waste chemistry and an assessment of the potential for closure of Pond 17 to result in generation, accumulation and ignition of phosphine gas. This evaluation must include a quantitative assessment of the long-term potential for generation of phosphine gas.

   e) An assessment of the presence and the potential for future generation of hydrogen cyanide gas and other toxic gas releases from Pond 17.

The Closure Plan must be revised to account for the above waste analyses and predicted waste behavior and describe in detail how the proposed closure will control, minimize or eliminate the post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to groundwater, surface water and the atmosphere.

SPECIFIC COMMENTS

1. **Page 1-1, Forth Paragraph and Section 2.3.1, Page 2-5.**
These paragraphs state laboratory test information on the NOSAP slurry and observations from Pond 8E have shown that NOSAP slurry does not smoke or burn when allowed to dry. The referenced laboratory data must be provided. Since the Closure Plan proposes to allow the water level to drop, which may allow the solids to oxidize, additional information must be provided demonstrating that the Closure Plan is protective of human health and the environment. Since phosphorus pentoxide smoke converts to phosphoric acid upon exposure to moisture, plans for minimizing emissions of both phosphorus pentoxide and phosphoric acid must be included in the Closure Plan. A method to monitor and measure phosphorus pentoxide and phosphoric acid must be included in the Closure Plan.

2. **Section 2.3.1, page 2-4, third paragraph**.
This paragraph should clarify that these samples were taken after the wastes were treated with lime in a slurry of 20 % solids. Since the waste was treated at the point samples were obtained, these samples were not representative of the waste at the point of generation.

3. **Section 2.3.2, page 2-5 Unit Description**
The operational history for Pond 17 should include a description of the status of the Pond 17 bottom liner system, i.e., if the primary liner is leaking or has leaked. The Closure Plan should include the dates any leaks were detected, leakage rates, and the total volumes pumped from the LCDRS sump.

4. **Section 4.2, Page 4-3**
Elemental phosphorus must be added to the list of constituents for groundwater monitoring.

5. **Section 6.1, Page 6-1, Second paragraph**
This paragraph discusses the plan to remove free surface water at the start of closure activities to allow pond solids to stabilize prior to initial fill. Since lowering the water level may result in phosphorus pentoxide emissions and potential burning, the plan must include a method to measure and monitor for phosphorus pentoxide and phosphoric acid, an action threshold and response actions, and actions which will be taken to prevent smoking or burning.

6. **Section 6.1, second bullet**:
This paragraph states water pumped from the pond will be sent directly to the land disposal restriction (LDR) treatment plant or otherwise managed in accordance with RCRA regulations. The plan must estimate (including the basis/support for the estimate) quantities of water which will be generated from the pond closure over the dewatering period, the specific use of the water at the LDR plant (since the LDR plant processes wastes not water), and be more specific regarding how the company will otherwise manage the water in accordance with RCRA since the water may be considered a reactive hazardous waste.

7. **Section 6, Page 6-2, ninth bullet**.
This bullet should include installation of temperature and pressure monitoring equipment.

8. **Section 6.6, Page 6-7,last paragraph**
This paragraph must include the number of days Astaris will notify EPA in advance of initiating closure work.

9. **Section 6.6.1, Page 6-7**
This paragraph states Astaris will continue to monitor the leak detection system for the surface impoundment. Results of this monitoring activity must be recorded in the operating record and reported annually.

10. **Section 6.6, Page 6-8, Table 6-1**
The schedule must be revised to describe in detail the activity of removing the bird netting and support structure.

11. **Section 7.1.4, Page 7-10**
This section of the Closure Plan suggests that phosphine gas problems in Pond 16S are "potentially attributable to the phosphine released during sludge intrusive activities of the center dike construction..." The problems in Pond 16S, however, could also be reasonably attributed to desaturation of the pond solids at the edge of the pond as a result of differential settlement and consequent exposure of the pond solids to air. The potential for this event occurring at Pond 17 must be addressed in the Closure Plan.

12. **Section 7.1.4, Page 7-10**
This section notes that contingent temporary gas collection piping will be installed under the temporary cover on Pond 17, in case gas buildup occurs as it did at Pond 16S. The Closure Plan must describe how this contingent system will be installed to prevent the pond solids from being exposed to air if the gas extraction system is operated.

13. **Section 7.1.4, Page 7-12**
The Closure Plan provides no information on the current status of the primary liner. If the primary liner in Pond 17 is currently not leaking, it is still reasonable to expect that minor breaks in the liner already exist or will develop during the post-closure period. If gases are generated in or volatilize from the wastes, they may migrate into the leak detection system (between the primary and secondary liners) and into the LCDRS sumps. Due to the potential for migration of gas outside the limits of the temporary and final cover, the Closure Plan must be revised to include gas monitoring outside the cap limits. Monitoring must include ambient monitoring at a downwind location and gas sampling in the LCDRS sump manhole during each inspection.

14. **Section 7.4.6, Page 7-41**
The Closure Plan must include the expected spacing and number of wick drains. Additional details must be provided on how the bottom liner will be protected from punctures during

installation of wick drains.

15. **Section 7.4.8, Page 7-42**
The Closure Plan must address the fate of the capped waste in the event the solids completely dewater after the final cap is in place.

16. **Section 7.4.1, Page 7-24**
The section states that free surface water will be removed 2 months before the start of initial fill, however, in order to deploy the geofabric, it may be necessary to pump water into the pond to a depth of 1 foot. Further justification for the initial dewatering must be provided since the initial removal of water 2 months before the start of fill could result in releases of phosphorus pentoxide or burning and appears to be unnecessary.

17. **Section 7.4.4 and 7.4.8, Page 7-42**
The potential for differential settlement during the initial and final filling are not addressed in the Closure Plan. The Closure Plan must include a proposal for monitoring and addressing differential settlement during initial and final fill.

18. **Section 8.1, Page 8-1**
Additional details must be provided on the removal of bird netting including but not limited to: the plan for removal, location of disposal, and schedule for deconstruction of the net.

19. **Section 8.2, Page 8-3**
This section must include a plan to monitor phosphorus pentoxide, phosphoric acid, hydrogen cyanide and phosphine emissions during the water removal and water addition during phase 1.

20. **Section 8.6.2.2, Page 8-9**
Additional detail must be provided on the proposal to dispose of the bird netting inside Pond 17. A detailed plan for safely handling the net removal to minimize the potential for disposal of the net in Pond 17 must be provided. In addition, a contingent plan for safe decontamination and disposal in case the netting becomes contaminated with elemental phosphorus waste must be developed. Disposal of any of the bird netting system in the pond is acceptable only if there is no other workable alternative.

21. **Section 8.6.2.2, Page 8-9**
If the FTIR units are removed due to the need to locate construction equipment, they must be relocated near the unit to continue collecting emission data in a manner consistent with the objectives of the Pond Management Plan. Plans for continued monitoring and responses if thresholds are exceeded must be included.

22. **Section 8.6.2.2, Page 8-10**
Additional detail regarding the installation and potential operation of the perforated PVC piping installed in the sand bedding layer to collect gas that may be generated during the initial closure

phase must be provided.

23. **Section 10, page 10-1**
The plan states that the facility will comply with 40 CFR 265.228(b)(2). This regulation requires maintenance and monitoring of the leak detection system, and recording of the amount of liquids removed from the leak detection sump at least once each week during the active life and closure period, (this may be reduced to monthly and in some cases quarterly or semi-annually after the final cover is installed). 40 C.F.R. §§ 265.226(b)(1) and 265.221(a) specifically require leak detection system inspection and recording of liquids removed, and collection and removal of pumpable liquids in the sump. The Closure Plan must be revised to provide for weekly inspection of the leak detection sump, and recording of the amounts of liquids removed, during the closure period and after the closure period, in accordance with the applicable regulations.

The Closure Plan does not include modifications to the piping from the leak detection ("LCDRS") sump to include standpipes, valve boxes or other arrangements where liquids removed from the sumps can be transferred to containers (e.g., tank trucks) or routed by pipeline to another treatment, storage or disposal unit. The Closure Plan must be revised to include modifications to the leak detection sump discharge piping and pump control system to allow collection and removal of pumpable liquids from the sump during and after closure.

The Plan must be modified to provide for monthly inspections of the leak detection sumps for liquids as required by 40 CFR 265.226(b). In addition, the leak detection system inspection description (page 10-8) does not include the requirement to remove pumpable liquids from the sumps and record the amounts of liquids removed. The Inspection Record Form must be revised to include recording the amount of liquid removed. In addition, the Closure Plan does not mention inspection or removal of liquids from the leak detection sump during closure. Revise the Post-Closure Plan Inspection Record Form and Activity Checklists to provide for initial monthly inspections of the leak detection sump for liquids, with potential reduced frequencies as provided in 265.226(b)(2). (A separate record form for leak detection system inspections is recommended, with spaces for recording the amounts removed.) Revise the leak detection inspection description to include removal of pumpable liquids and recording of the amounts of liquids removed from each sump.

The Closure and Post-Closure Plans do not mention the pump operating level in the leak detection (LCDRS) sump. This elevation or depth is the level at which the pump operating switch must be set to prevent backup of liquids in the impoundment drainage layer and to minimize head in the sump. The pump operating level is the benchmark against which liquid levels must be measured to comply with 40 CFR 265.226(b)(2). Revise the Closure and Post-Closure Plans to define the pump operating level in the leak detection sump, and provide for measuring of liquid in the leak detection sump in relation to the pump operating level during every inspection of the sump.

24. **Section 10 Action Leakage Rate**

The Closure and Post-Closure Plans do not include determination of the average daily flow rate, and comparison with the action leakage rate, as required by 40 C.F.R. §265.222(c). The average daily flow rate must be calculated weekly during the active life and closure period, and monthly or less frequently, in accordance with 40 CFR 265.226(b), during the post-closure period.

Revise the Closure and Post-Closure Plans to provide for calculation of the average daily flow rate, and comparison with the action leakage rate and to include a revised response action plan that complies with 40 C.F.R.§ 265.223.

25. **Section 10.8, page 10-10**

The Post-Closure Plan proposes an action level of 27 inches of mercury as the alarm level and (if confirmed) the criterion for conducting gas sampling. The plan must be revised to explain how this action level was selected. Records of the typical seasonal ranges and average of ambient barometric pressure in the vicinity of the facility must be provided to support this action level.

Pond 17 Closure Plan June 2001 NOD 1
CONCURRENCES:

INITIALS					POLICY		ER IS INFO SUBMITTED	
NAME	Meyer	Boyd			YES	NO	YES	NO X
DATE	9/28/01	9/28/01			IF YES, BC ATTACHED			

PEER REVIEW:

INITIALS						
NAME	Palumbo		Fisher	Brown	Orlean	Hedeen
DATE					9/28/01	9/28/01

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ob Hartman
CRA/CERCLA Manager
MC Corp. - Pocatello Plant
O Box 4111
ocatello, ID 83202

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bcc: Andy Boyd
Sylvia Burges
Gil Haselberger

Pond 17 Closure Plan June 2001 NOD 1
CONCURRENCES:

INITIALS ☞					POLICY		ERIS INFO SUBMITTED	
NAME	Meyer	Boyd			YES	NO	YES	NO X
DATE ☞	9/28/01	9/28/01			IF YES, BC ATTACHED			

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NAME ☞	Palumbo		Fisher	Brown	Orlean	Hedeen
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